National Aeronautics and Space Administration

NASA's Impact in Iowa: A Tech Transfer Perspective

You know that NASA studies our planet, our sun, the solar system, and the Universe.
But did you know about the space program's economic impact here on Earth?

In 2011, NASA invested over **$6 million** in the state of Iowa.

Since 2001, NASA's SBIR/STTR Program has invested over
$2 million in **4 Iowa companies**
and more than **$1.2 billion** nationwide.

How NASA's SBIR/STTR Program Benefits Iowa

NASA is committed to moving technologies and innovations into the mainstream of the U.S. economy, and the Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) program helps fulfill this goal.

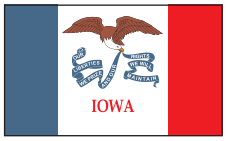
SBIR/STTR stimulates technological innovation by encouraging small, high-tech companies—particularly minority and disadvantaged businesses—to partner with NASA to help meet its research and development needs in key technology areas. At the same time, this program strengthens small companies by enabling them to bring cutting-edge new products into the U.S. economy.

The list to the right highlights Iowa businesses that received SBIR/STTR contracts from NASA since 2001. **(Visit http://sbir.nasa.gov for more information on the SBIR/STTR program.)**

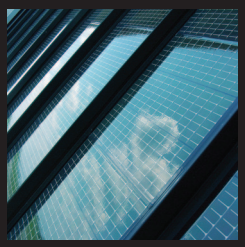
NASA SBIR/STTR Companies in Iowa

Softronics, Ltd.	Cedar Rapids
Sukra Helitek, Inc.	Ames
Triple F, Inc.	Des Moines
Vibroacoustics Solutions, Inc.	Boone

Iowa



How NASA Spinoffs Benefit Iowa



Paper-Thin Plastic Film Soaks Up Sun to Create Solar Energy *(Ames)*
NASA partnered with Iowa Thin Film Technologies (now PowerFilm Solar, a division of PowerFilm, Inc.) to develop a lightweight, flexible thin film solar cell. NASA helped improve the company's process for depositing solar cells on rolls of thin, flexible plastic. This enabled the company to manufacture a line of next-generation, thin film solar panels that can easily be integrated into consumer and military products.

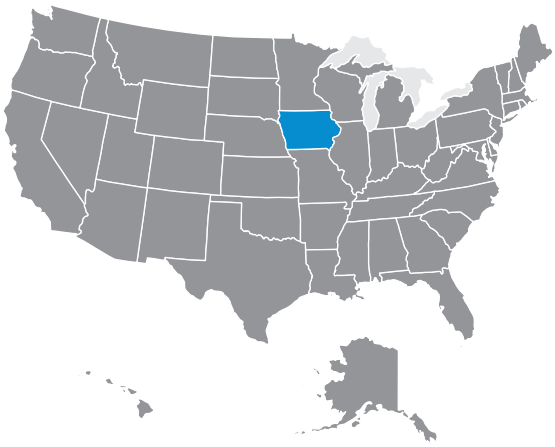
PowerFilm Solar markets a solar rechargeable AM/FM headphone radio, eliminating the cost and inconvenience of replacing batteries. They also sell solar tents that can provide up to 2 kilowatts of power for campers or soldiers in the field. The solar tents help meet the Army's growing demand for rapid-response rates and portable, remote power, while eliminating the need for noisy generators, spare batteries, and excessive fuel storage. When the sun is shining, a large tent can power up to 66 laptops or 260 cell or satellite phones. NASA's support helped PowerFilm Solar become a leading producer of thin film photovoltaics.

NASA Technology for Safer Skies *(Cedar Rapids)*
In the early 1990s, NASA developed an instrument for detecting and predicting windshear, a leading cause of aircraft accidents. Windshear, a sudden shift in wind direction and velocity, causes intense downdrafts and can force planes to the ground before pilots can react. NASA's technology enabled manufacturers to develop their own commercially viable, proprietary windshear detection and prediction systems to improve aircraft safety.

After participating in NASA's testing program, Rockwell Collins developed algorithms to create its own software system for predicting windshear. The company's aviation electronics systems are now installed in the flight decks of nearly every cargo aircraft in the world. The partnership with NASA enabled the company to develop innovative systems that make aircraft safer for pilots, crew, and the flying public.

NASA Research Helps City of Dubuque *(Dubuque)*
NASA Tech Briefs magazine reports new and commercially significant NASA technologies so that engineers, managers, and scientists can use this information to improve competitiveness and productivity. The publication had precisely this effect on the City of Dubuque when a computer system operated by the Dubuque Water Division malfunctioned. The division purchased commercial isolation modules that solved the immediate problem, but the Water Division's tight budget demanded a more cost-effective, long-term solution.

After reading an article in Tech Briefs describing NASA's novel isolation circuit, a technician in the Water Division sent for the technical support package, studied details of the invention, and learned the name of the vendor supplying the circuit. The information supplied by Tech Briefs and the vendor helped the Dubuque Water Division purchase an isolation circuit that cost 50 percent less than its competitors and solved their computer problem.



NASA actively seeks partnerships with U.S. companies that can license NASA innovations and create "spinoffs" in areas such as health and medicine, consumer goods, transportation, renewable energy, and manufacturing. When businesses leverage NASA technologies to develop new products, it not only benefits the regional economy, but significantly strengthens the nation's competitiveness in the global marketplace.

NASA's centers across the country have helped 13 Iowa companies develop revolutionary spinoff technologies.

Learn more about how NASA innovations benefit the public in *Spinoff*, an annual publication that highlights NASA's most significant technology transfer successes.
(Available at: http://www.sti.nasa.gov/tto)

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